

# Introduction to the First Edition

The purpose of this book is to explore the origins, pathophysiology, and diagnostic accuracy of many of the physical signs currently used in adult patients. We have a wonderfully rich tradition of physical diagnosis, and my hope is that this book will help to square this tradition, now almost two centuries old, with the realities of modern diagnosis, which often rely more on technologic tests, such as clinical imaging and laboratory testing. The tension between physical diagnosis and technologic tests has never been greater. Having taught physical diagnosis for 20 years, I frequently observe medical students purchasing textbooks of physical diagnosis during their preclinical years, to study and master traditional physical signs, but then neglecting or even discarding this knowledge during their clinical years, after observing that modern diagnosis often takes place at a distance from the bedside. One can hardly fault a student who, caring for a patient with pneumonia, does not talk seriously about crackles and diminished breath sounds when all of his teachers are focused on the subtleties of the patient's chest radiograph. Disregard for physical diagnosis also pervades our residency programs, most of which have formal x-ray rounds, pathology rounds, microbiology rounds, and clinical conferences addressing the nuances of laboratory tests. Very few have formal physical diagnosis rounds.

Reconciling traditional physical diagnosis with contemporary diagnostic standards has been a continuous process throughout the history of physical diagnosis. In the 1830s the inventor of topographic percussion, Professor Pierre Adolphe Piorry, taught that there were nine distinct percussion sounds which he used to outline the patient's liver, heart, lungs, stomach, and even individual heart chambers or lung cavities. Piorry's methods flourished for more than a century and once filled 200-page manuals,<sup>1</sup> although nowadays, thanks to the introduction of clinical imaging in the early 1900s, the only vestige of his methods is percussion of the liver span. In his 1819 *A Treatise on Diseases of the Chest*,<sup>2</sup> Laennec wrote that lung auscultation could detect "every possible case" of pneumonia. It was only a matter of 20 years before other careful physical diagnosticians tempered Laennec's enthusiasm and pointed out that the stethoscope had diagnostic limitations.<sup>3</sup> And, for most of the 20th century, expert clinicians believed that all late systolic murmurs were benign, until Barlow et al in 1963 showed they often represented mitral regurgitation, sometimes of significant severity.<sup>4</sup>

There are two contemporary polar opinions of physical diagnosis. Holding the less common position are clinicians who believe that all traditional physical signs remain accurate nowadays, and these clinicians continue to quiz students about Krönig isthmus and splenic percussion signs. A more common position is that physical diagnosis has little to offer the modern clinician and that traditional signs, though interesting, cannot compete with the accuracy of our more technologic diagnostic tools. Neither position, of course, is completely correct. I hope this book, by examining the best evidence comparing physical signs to current diagnostic standards, will bring clinicians to a more appropriate middle-ground: that physical diagnosis is a reliable diagnostic tool that can still help clinicians with many, but not all, clinical problems.

Although some regard evidence-based medicine as “cookbook medicine,” this is incorrect because there are immeasurable subtleties in our interaction with patients that clinical studies cannot address (at least, not as yet) and because the diagnostic power of any physical sign (or any test, for that matter) depends in part on our ideas about disease prevalence, which in turn depend on our own personal interviewing skills and clinical experience.\* Instead, evidence-based physical diagnosis simply summarizes the best evidence available, whether a physical sign is accurate or not. The clinician who understands this evidence can then approach his own patients with the confidence and wisdom that would have developed had he personally examined and learned from the thousands of patients reviewed in the studies of this book.

Sometimes, comparing physical signs with modern diagnostic standards reveals that the physical sign is outdated and perhaps best discarded (e.g., topographic percussion of diaphragm excursion). Other times the comparison reveals that physical signs are extremely accurate and probably underused (e.g., early diastolic murmur at the left lower sternal area for aortic regurgitation, conjunctival rim pallor for anemia, or a palpable gallbladder for extrahepatic obstruction of the biliary ducts). And still other times, the comparison reveals that the physical sign is the diagnostic standard, just as most of physical examination was a century ago (e.g., systolic murmur and click of mitral valve prolapse, hemiparesis for stroke, neovascularization for proliferative diabetic retinopathy). For some diagnoses, a tension remains between physical signs and technologic tests, making it still unclear which should be the diagnostic standard (e.g., the diagnoses of cardiac tamponade and carpal tunnel syndrome). And for still other others, the comparison is impossible because clinical studies comparing physical signs to traditional diagnostic standards do not exist. My hope is that the material in this book will allow clinicians of all levels—students, house officers, and seasoned clinicians alike—to examine patients more confidently and accurately, thus restoring physical diagnosis to its appropriate, and often pivotal, diagnostic role. After being well versed in evidence-based physical diagnosis, clinicians can then settle most important clinical questions at the time and place they should be first addressed—the patient’s bedside.

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\*These subjects are discussed fully in Chapters 2 and 5.

**REFERENCES**

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